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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SAXENA, AKASH

ART UNIT

PAPER NUMBER

2128

NOTIFICATION DATE

DELIVERY MODE

07/15/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/827,078	Applicant(s) BECK ET AL.	
	Examiner AKASH SAXENA	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claim(s) 1-22 has/have been presented for examination based on amendment filed on 7th April 2008.
2. Claim(s) 1, 3, 4, 7, 8, 13-22 is/are amended.
3. Claim(s) 1-22 remain rejected under 35 USC § 101.
4. Claim(s) 1-22 remain rejected under 35 USC § 112.
5. Claim(s) 1-22 is newly rejected under 35 USC § 103 necessitated by amendment.
6. The arguments submitted by the applicant have been fully considered. Claims 1-22 remain rejected and this action is made FINAL. The examiner's response is as follows.

Response to Remarks for Claim Rejections - 35 USC § 101

(Argument 1) Applicant has argued in Remarks Pg.11:

Applicants have amended claims 1, 3, 4, and 22 to recite "combining the first and second configuration models into a single, consolidated model that maintains a non- cyclic chain of dependencies among families and features of families for use in answering configuration questions." Applicants respectfully submit that the "single, consolidated model" is clearly a useful, tangible, and concrete result. The claims clearly recite that the "single, consolidated model" produces a useful result, i.e. "for use in providing an answer to configuration questions."

... Applicants respectfully submit that invention recites a practical application of "combining the first and second configuration models" that produces a real-world result, i.e. "a single, consolidated model that maintains a non- cyclic chain of dependencies among families and features of families for use in answering configuration questions."

(Response 1) Examiner respectfully disagrees with applicant as answering configuration question and consolidating into a single model do not recite useful concrete and tangible results. The "single consolidated model" does not represent a real world application and is an abstract idea unless it is applied to a particular real world application like specific product configuration. Examiner appreciates pointing

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to MPEP, however MPEP stresses "[A]n application of a law of nature or mathematical formula to a ... process may well be deserving of patent protection." Diehr, 450 U.S. at 187, 209 USPQ at 8 (emphasis added). No *explicit application* is recited in the claim. Examiner finds applicant's arguments unpersuasive.

Response to Remarks for Claim Rejections - 35 USC § 112¶1st

(Argument 2) Applicant has argued in Remarks Pg.12:

A. The 35 U.S.C. § 112, first paragraph rejection is based upon the same rationale as the 35 U.S.C. § 101 rejection. Accordingly, Applicants respectfully request withdrawal of the rejection for the same reasons set forth above with respect to the 35 U.S.C. § 101 rejection.

(Response 2) Examiner finds argument made as being unpersuasive.

(Argument 3) Applicant has argued in Remarks Pg.12:

B. Claims 1-22 are also rejected under 35 U.S.C. § 112, first paragraph for failing to comply with the written description requirement based upon applicant's previous arguments. Applicants respectfully disagree with the rejection. Nevertheless, Applicants have amended claims 1, 3, 4, and 22 to clearly distinguish between the present invention and Lichtenberg based upon the language recited in the claims alone.

(Response 3) Applicant has failed to fully address the rejection and future responses in the similar manner would be held non-responsive (37 CFR 1.111).

Response to Remarks for Claim Rejections - 35 USC § 112¶2nd

(Argument 4) Applicant has argued in Remarks Pg.13:

C. Claims 1-22 are also rejected under 35 U.S.C. § 112, second paragraph because "it is not clear which statutory category the claim should be examined under - i.e. a "method" claim of a "system" claim. Applicants have deleted "using an automated process". Applicants respectfully submit that claim 1 recites a "method", claim 3 recites a "computer system", claim 4 recites a "computer readable medium", and claim 22 recites a "computer system". Applicants respectfully submit that all of the claims are recited within single statutory categories. Accordingly, Applicants respectfully request withdrawal of the rejection.

D. Applicants expressly invoke 35 U.S.C. § 112, para. 6 for claim 22. The Office Action states that there is no support indicated in the specification for claim 22 as a means-plus-function claim under 35 U.S.C. § 112, para. 6. Applicants respectfully refer the Examiner to, for example, Figures 10 and 11 as described in paragraphs 55-152, which set forth an exemplary process executable by, for example, the computer system of Figure 13. Accordingly, Applicants respectfully request withdrawal of the rejection.

(Response 4) Examiner withdraws the rejection under based on applicant's arguments and amendments to claim.

Response to Remarks for Claim Rejections - 35 USC § 102

7. New grounds of rejection are presented necessitated by amendment rendering arguments presented moot.

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Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 1-22 recite a abstract idea of combining two models (DAG) which specification describes as represented by Directed Acyclic Graphs (DAG) (Specification: (110, Fig.2). Combining DAG is a mathematical concept. Binary decision diagram (BDD) is a form of DAG and a paper showing the combining BDD¹ is included as prior art.

Claims 1-22 do not claim any practical application of the combination.

Section 2106 [R-2] (Patentable Subject Matter - Computer-Related Inventions) of the MPEP recites the following:

If the "acts" of a claimed process manipulate only numbers, abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. Schrader, 22 F.3d at 294-95, 30 USPQ2d at 1458-59. Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process.

"In practical terms, claims define nonstatutory processes if they: consist solely of mathematical operations without some claimed practical application (i.e., executing a "mathematical algorithm"); or - simply manipulate abstract ideas, e.g., a bid (Schrader, 22 F.3d at 293-94, 30 USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33 F.3d at 1360, 31USPQ2d at 1759), without some claimed practical application."

Claims 1-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As described through these claims, the claimed invention does not physically transform an article or physical object to a different state or thing, so to be eligible for patent protection, the claimed invention as a whole must accomplish a practical application. That is, it must produce a useful,

¹ Symbolic Model Checking An approach to the state explosion problem; Kenneth L. McMillan, May 1992, Pg. 41-44

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concrete and tangible result." State Street, 149 F.3d at 1373-74, 47 USPQ2nd at 160102. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept.

Further, claims 1-22 do not seem to produce a tangible result. The tangible requirement of State Street decision requires that the claims must recite at least one 35 USC 101 judicial exception, in that the process claim must set forth a practical application of the 35 USC 101 judicial exception. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application.").

Applicant has amended the limitation (underlined)

"combining the configuration models into a single, consolidated model that maintains a non-cyclic chain of dependencies among families and features of families for use in answering configuration questions."

First "for use in answering configuration questions" does not make the claim statutory as the result of the method step are still not tangible. Secondly, the claim still presents an abstract idea not directed towards any claimed specific transformation of physical object and as understood by claim interpretation is limited to mathematical concept of altering a DAG presentation.

Independent claims 1, 3, 4 and 22 all recite the intended use of the combining the DAG in the last step.

MPEP 701 & 2105 states:

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed

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invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

In this case the intended use does not result in any structural difference and does not add any limitation to the method, system, or program product claims. The rejection is maintained under this statute.

Regarding Claim 4, 20-22

Claim 4 discloses computer readable medium, which is not explicitly present in the specification; however since specification (149)-(150) discloses use of electronic signal to store the program, this rejection is made as program stored in energy medium is non-statutory. MPEP 2106.01.

Claims 20-22 also disclose computer readable medium and is rejected similarly.

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Claim Rejections - 35 USC § 112¶1st

The following is a quotation of the first paragraph of 35 U.S.C. §112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-22 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific asserted utility or a well established utility.

The claimed invention is an abstract idea as explained in the 35 USC 101 claim rejection above. There may be a specific and substantial utility present in the specification, however it is not claimed.

Claims 1-22 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a -specific and substantial-- asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

10. Further, Claims 1-22 are rejected under 35 U.S.C. §112, first paragraph because current case law (and accordingly, the MPEP) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicant could have disclosed how to practice the undisclosed practical application. This is how the MPEP puts it:

(“The how to use prong of section 112 incorporates as a matter of law the requirement of 35 U.S.C. §101 that the specification disclose as a matter of fact a practical utility for the invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. §101, then the application also fails as a matter of law to enable one of ordinary skill in the art to use the invention under 35 U.S.C. §112.”); In re Kirk, 376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA

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1967) ("Necessarily, compliance with § 112 requires a description of how to use presently useful inventions, **otherwise an applicant would anomalously be required to teach how to use a useless invention.**")
See, MPEP 2107.01(IV), quoting In re Kirk (emphasis added).

Therefore, claims 1-22 are rejected on this basis.

11. Claims 1-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, based on applicant's argument, that step of determining the conflict is not based on the exclude type of rule, examiner is unclear from the disclosure how the conflict is determined. Please see claim interpretation section and Response to Arguments for 35 USC § 102 Rejection.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

- 1. Claim 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over by U.S. Patent Publication No. 2002/0165701 by Lichtenberg et al (Lichtenberg hereafter), in view of IEEE article “The Combining DAG: A Technique for Parallel Data Flow Analysis by Robert Kramer et al (Kramer hereafter).**

Regarding Claim 1 (Updated 9/21/07)

Lichtenberg teaches a method of consolidating multiple configuration models in to a single consolidated model (being a directed acyclic graph) among the families and feature of the families (described as component & associated rules) (Lichtenberg: [0076][0094][0062], Fig.1).

Lichtenberg teaches:

determining if a conflict exists between at least two of the configuration models, wherein the configuration models are organized in accordance with respective directed acyclic graphs, each configuration model includes at least one ancestor configuration model family and a child configuration model family below the ancestor family, a first conflicting configuration model comprises a configuration model that includes a release of a product that is not released in at least a second conflicting configuration model and the product is defined using the ancestor and child configuration model families;

as determining the partial configurations ([0006]) which may be conflicting and only certain configuration out of all the possibilities satisfy the final product requirement ([0007]-[0008]). The ancestral configuration could be understood as configuration for the bike without the 2 possible conflicting gear configuration (as conflicting child configurations).

Lichtenberg teaches:

extending the ancestor family of the product in the first conflicting configuration model to be compatible with second conflicting configuration model;

as combining two DAG where there is ancestral configuration (as node with same configuration) is identified ([0076]-[0084]).

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Lichtenberg teaches:

restricting child family in the first conflicting configuration model so that the child family is not released in the extension of the ancestor family;

as determining the compatible and non-compatible products where one of the alternatives is selected ([0092]-[0096]).

Lichtenberg teaches:

combining the configuration models into a single, consolidated model that maintains a non-cyclic chain of dependencies among families and features of families for use in answering configuration questions.

as combining the DAG ([0076]).

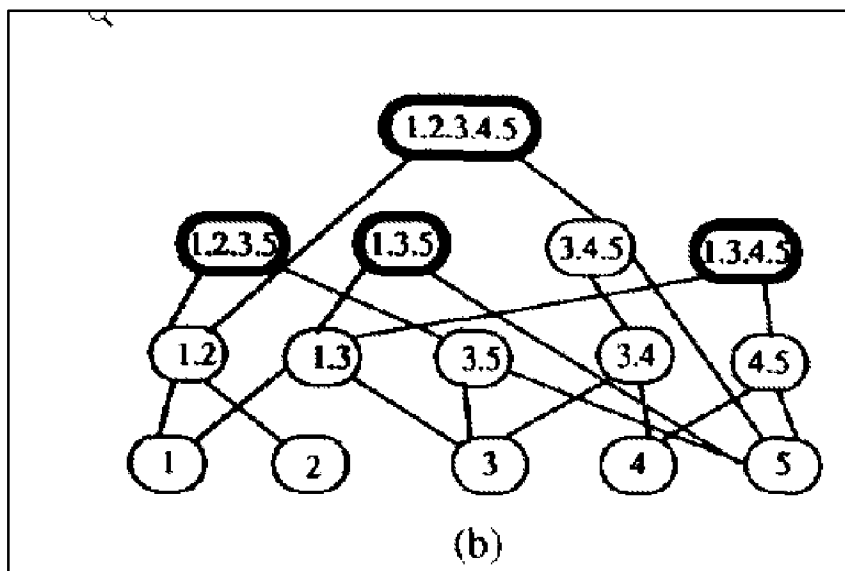
Arguendo, even if the amended limitations are not clearly taught by *Lichtenberg*,

Kramer teaches combining conflicting paths to remove loops to form a DAG and then simplifying and combining the DAGs (See Pg.810 and Fig10).

Specifically, Kramer teaches the amended limitation:

"...an ancestor configuration model family space that is different than an ancestor configuration model family space of a second of the conflicting configuration model, and each child configuration model family space constrains the ancestor configuration model family space above the child in accordance with configuration rules of the configuration model to which the child belongs;"

As different ancestral space for the two or more ancestral flows as flows 1.2.3.5,

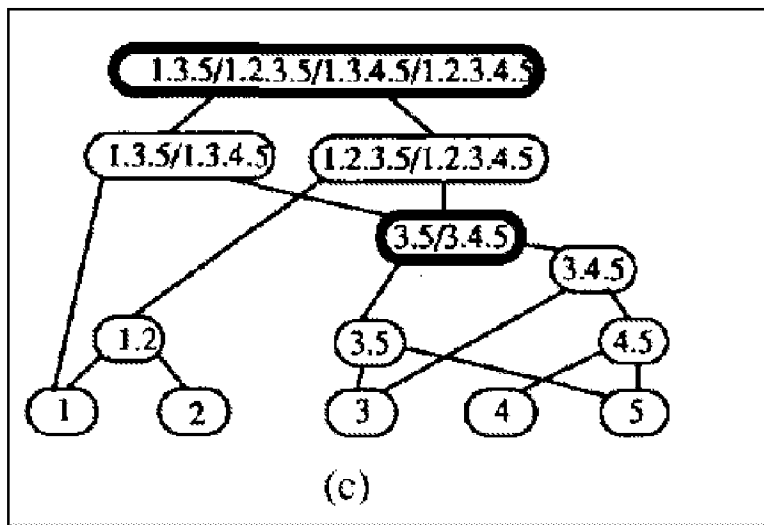


1.3.5 and 1.3.4.5. The different child flows are shown as 1.2, 1.3, 3.5, 3.4 and 4.5.

Specifically, Kramer teaches the amended limitation:

extending at least one of the ancestor configuration model family spaces of the conflicting configuration models so that the ancestor configuration model family spaces of the first and second conflicting configuration models represent the same ancestor configuration model family space

as extending the ancestral configuration model between two conflicting flows so the ancestral models are combined as shown bolded below in Fig.10 b. Please also see



Kramer Section IV.

Construction of the DAG
from the Control flow Graph.

As can also be seen the
dependent conflicting child
node 1.3 is removed from
the child configuration 1.3,

1.3.5 etc. DAG (See comparing Fig.10 (b) and (c)) thereby meeting the amended
limitation ...

“...removing from the child configuration model family space any configuration
space extended in the ancestor of the child configuration family space”.

And combining the first and second configuration models as 3.5 and 3.4.5 for
example in Fig.10(c).

Kramer however fails to teach that the DAGs are for consolidating multiple
configuration models and limits the teaching to consolidating multiple control paths in
a non-cyclic way as in a DAG.

Lichtenberg cures this deficiency by applying the technique of combining DAGs, in this case product model DAGs for purpose of product model consolidation and configuration (Lichtenberg: Fig.1).

It would have been obvious to one (e.g. a designer) of ordinary skill in the art at the time the invention was made to apply the teachings of Kramer and Lichtenberg to each other. The motivation to combine would have been that Lichtenberg teaches that there are multiple known methodologies to combine the DAG (Lichtenberg: [0076]), however fails to disclose the exact details, which is a deficiency Kramer cures by demonstrating through application (control flow graph DAGs) (Kramer: Fig.10 (b) and (c) and Section IV).

Regarding Claim 2

Lichtenberg teaches detecting any inconsistencies between rules included in the consolidated model (Lichtenberg: [0090]-[0094] – non-compatible products) and attempting to resolve any detected inconsistencies by not allowing the user to select a inconsistent solution (Lichtenberg: [0096]-[0108]).

Regarding Claim 3-4 (Updated 7/2/08)

Limitations presented in claims 3-4 are similar to limitations presented in claim 1 and rejected likewise. Lichtenberg teaches a system (Lichtenberg: [0043]) and a computer program (Lichtenberg: Fig. 2-3, [0272]) for implementing the method of claim 1. *Lichtenberg teaches wherein each model comprises only rules that define a non-cyclic chain of dependencies among families and features of families (Lichtenberg: [0062]-[0073]) and at least one model includes a rule that causes a*

configuration conflict with another model (Lichtenberg: [0062], [0090], [0092]-[0094], [0102]-[0105], [0134]-[0150] – partial DAG representing features and families, [0162], [0191], [0383] – incompatibility between selected model and reconfiguration).

Newly amended limitations are taught by Kramer as well as shown in claim 1 rejection.

Regarding Claim 5

Lichtenberg teaches wherein the configuration models represent configuration models of vehicles (Lichtenberg: Fig.1 – Showing a bicycle).

Regarding Claim 6

Lichtenberg teaches wherein the consolidated model includes only buildable configurations (Lichtenberg: [0406]-[0412] – excluding incompatible selections).

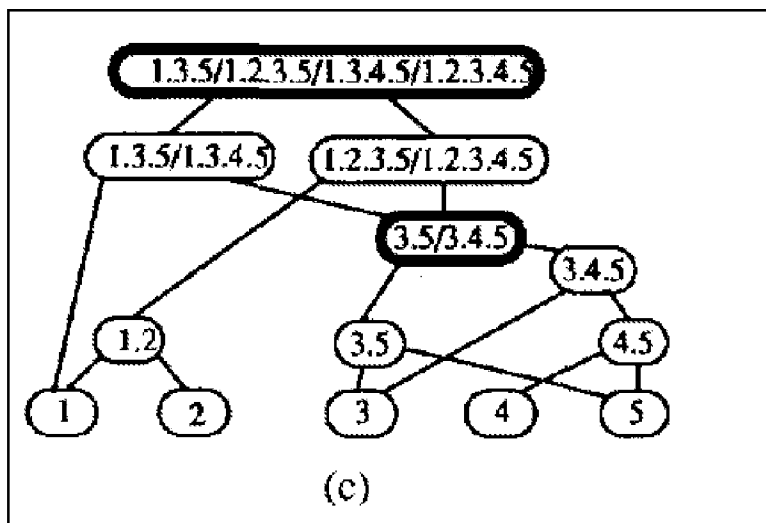
Regarding Claim 7 (Updated 7/2/08)

Lichtenberg teaches *extending the ancestor family of the product in the first conflicting configuration model to be compatible with second conflicting configuration model* as combining the DAG's (Lichtenberg: [0076]-[0084]) further comprises extending a rule from *the first conflicting configuration model into the ancestor family and* (Lichtenberg: [0062], [0076]-[0079]); and repairing the extension of the rule in the child family (Lichtenberg: [0133]-[0150]).

Kramer teaches the amended limitation:

extending at least one of the ancestor configuration model family spaces of the conflicting configuration models so that the ancestor configuration model family spaces of the first and second conflicting configuration models represent the same ancestor configuration model family space

as extending the ancestral configuration model between two conflicting flows so the ancestral models are combined as shown bolded below in Fig.10 b. Please also see



Kramer Section IV.

Construction of the DAG
from the Control flow Graph.

As can also be seen the
dependent conflicting child
node 1.3 is removed from
the child configuration 1.3,

1.3.5 etc. DAG (See comparing Fig.10 (b) and (c)) thereby meeting the amended
limitation ...

“...removing from the child configuration model family space any configuration
space extended in the ancestor of the child configuration family space”.

Regarding Claim 8 (Updated 7/2/08)

Lichtenberg teaches combining the *configuration* models into a single, consolidated *configuration* model further comprises loading the *configuration* models into a memory of the computer system (Lichtenberg: [0027]-[0034], [0224]-[0233], [0272]-[0274]); constructing a directed acyclic graph of all rules in all the models (Lichtenberg: [0272]-[0274]); for each *configuration* model, determining which portions of an overall configuration space for which the *configuration* model does not provide a buildable configuration (Lichtenberg: [0008], [0060] and [0090]); and for each *configuration* model, constraining statements of the rules with in the

configuration model to fall within a space of defining features of the *configuration* model (Lichtenberg: [0061]-[0062]).

Regarding Claim 9

Lichtenberg teaches

“determining which portions of an overall configuration space for which each *configuration* model does not provide a buildable configuration further comprises determining which families are ancestors of families of defining constraints and subtracting a right hand side and a left hand side of each rule of each family that are ancestors of families of defining constraints from a rule representing all buildable configurations.”

as providing an intersection to provide all compatible (buildable) or incompatible (un-buildable) products (Lichtenberg: [0085]-[0094]).

Regarding Claim 10

System claim 10 discloses similar limitations as claim 2 and is rejected for the same reasons as claim 2. Claim is amended for grammatical reasons.

Regarding Claim 11

System claim 11 discloses similar limitations as claim 5 and is rejected for the same reasons as claim 5.

Regarding Claim 12

System claim 12 discloses similar limitations as claim 6 and is rejected for the same reasons as claim 6.

Regarding Claim 13 (Updated 7/2/08)

System claim 13 discloses similar limitations as claim 7 and is rejected for the same reasons as claim 7. Further, claim is amended for grammatical reasons.

Regarding Claim 14 (Updated 7/2/08)

System claim 14 discloses similar limitations as claim 8 and is rejected for the same reasons as claim 8. Claim is amended for grammatical reasons.

Regarding Claim 15 (Updated 7/2/08)

System claim 15 discloses similar limitations as claim 9 and is rejected for the same reasons as claim 9. Claim is amended for grammatical reasons.

Regarding Claims 16-21 (Updated 7/2/08)

Computer program product claims 16-21 disclose similar limitations as claim 2, 5-9 and are rejected for the same reasons as claims 2, 5-9 respectively.

Regarding Claim 22 (Updated 7/2/08)

Limitations presented in claim 22 are similar to limitations presented in claim 1 and rejected likewise. No specific support was cited for “means for” language and is this claim is interpreted ordinarily.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AKASH SAXENA whose telephone number is (571)272-8351. The examiner can normally be reached on 9:30 - 6:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini S. Shah can be reached on (571)272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Akash Saxena/
Examiner, Art Unit 2128

/Alexander J Kosowski/
Primary Examiner, Art Unit 2128